

A Spacer for Replacing Vertebrae with Minimally Invasive Posterior Surgery

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Technology description

The intellectual property relates to a system to facilitate implantation of an expandable spacer that can be inserted by a minimally invasive surgical procedure to replace unstable vertebrae or other compromised bone structures. The spacer is characterized by an expansion ratio of over 300% and can be implanted through smaller surgical openings in vertebrectomy. The spacer is inserted fully contracted, with the aid of an auxiliary tool. When the spacer is correctly positioned, the auxiliary tool serves to fill the spacer with self-setting cement. Once the cement is fully cured the entire device is rendered rigid and capable of withstanding physiological loads.

Vertebrectomy is frequently required to decompress the spinal cord and/or stabilize the vertebral column from fracture. Vertebral bodies can be removed from either an anterior or posterior approach. Anterior approaches provide the widest access but are associated with considerable co-morbidities with respect to the thoracotomy and abdominal wall pain. Posterior approaches are less invasive but are limited by access. Small incisions are often not possible when a large spacer must be inserted to replace a vertebra, and current spacers have limited expansion capabilities. The system of the present invention overcomes current limitations.

Institution

[McGill University](#)

联系我们



叶先生

电话：021-65679356

手机：13414935137

邮箱：yeyingsheng@zf-ym.com